NEW YORK CITY
COLLEGE OF TECHNOLOGY
THE CITY UNIVERSITY OF NEW YORK

DEPARTMENT OF ARCHITECTURAL TECHNOLOGY

DESIGN FOUNDATION II - COURSE OUTLINE

WEEK 01 – 04 PROJECT 01 – BRIDGING SURFACES

OBJECTIVE

To develop a design for a bridge between two structures, taking into account the nature of connecting or spanning between two surfaces, material properties and structural strength, the relation between the buildings being connected and the surrounding urban fabric, and the experience of the body moving between the spaces.

Bridge connecting former Jehovah Witness buildings

DESCRIPTION

Formerly owned by the Watchtower, the buildings linked by the current bridge create a gateway into DUMBO, offering great exposure for the area. In the following months the Brooklyn Tech Triangle will be taking control of the buildings and open them to local artist and their studios, as well as their offices. Your task is to design a new bridge that will highlight the changes that are occurring in the area.

CONSIDERATION

How does your design transition between the vertical surfaces of the existing facades into a horizontal construction?

- How are fundamental languages of lines, planes and volumes integrated and expressed?
- How do the sequences of varying spatial conditions enhance the experience of "path"?
- What is the relationship between interior and exterior? Is the exterior accessible? To what degree is the structure enclosed?
- What is the relationship between structure and skin?
- How is this experience of passage and transition a function of time?

- How does the architecture allow for vertical as well as horizontal displacement?
- How are views from within the bridge shaped or framed within the passage and to the exterior?
- How does the orientation of the building impact the design?

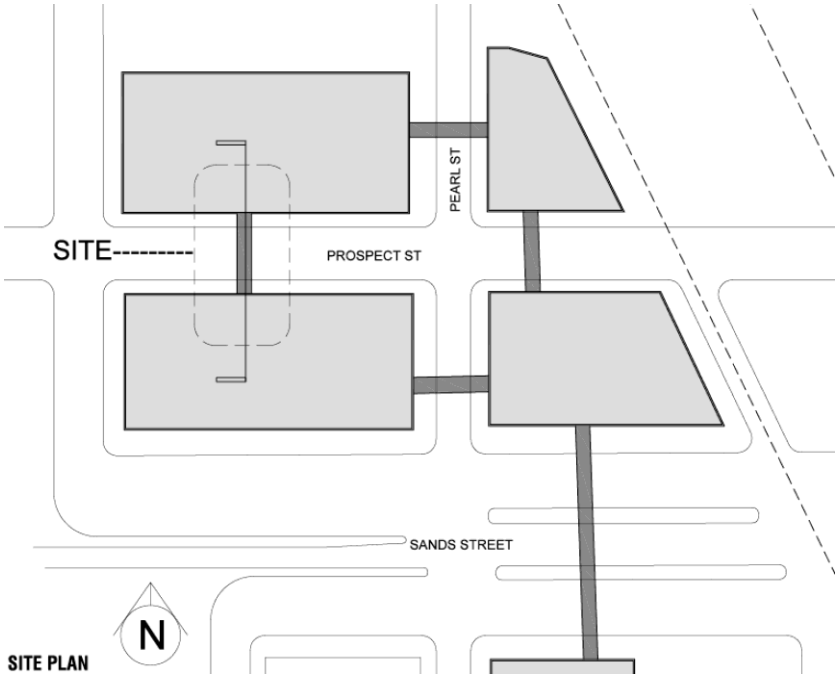
- How is rhythm of the architectural vocabulary emphasized through repetition and variation?
- What are the differences between the two ends of the link?
- How do shade and shadow contribute to the reading of the design and to the way the bridge is experienced and perceived?
- How do the experiences and readings of the bridge vary from night to day?
- How do the experiences vary in different seasons?
- Is there a difference in directionality moving from one building to the other?

DESIGN PARAMETERS

1. The new link will replace the existing two-story walkway at the designated site.
2. The overall dimension of the new bridge design may not exceed:
   20' width x 20' height x 55' length
3. The floors at the existing 5th and 6th floors of the buildings adjacent to the bridge will be combined to be double-height, public spaces.
4. The degree of enclosure and operability of envelope will be determined by each student.
5. Additional program may be proposed by each student.

SITE

The site for this project at Prospect Street, between Pearl Street and Cadman Plaza, Brooklyn. Reflecting the dramatic changes in the DUMBO neighborhood, the existing buildings in this area have changed owners and are presently being redesigned to accommodate DUMBO Tech Triangle offices. Formerly owned by the Watchtower society, the buildings are linked by several existing walkways. In the near future, the Brooklyn Tech Triangle will take ownership of the buildings and open them to local artists and their studios as well as their offices. Your task is to design a new link to replace the existing two-level connection, enhancing the vibrant connectivity among the new and diverse tenants and programs, between the buildings and this unique urban context, creating a gateway into DUMBO.



PROCESS

Part 1: Site Documentation + Site Creation
Visit the site and through photography and sketching, document, materials, site conditions and general scale of the area. Each student should construct a façade model incorporating the two facades being bridged, along with the ground plane.

Part 2: Design Concepting + Model Making
Students should consider a use for their bridge. For example, if the bridge is connecting office space, is this a location for a public reading lounge? What other amenities could happen in this bridge space? Be exact: if the bridge is connecting a technology company and a artist, what might result? Explore your concepts though writing and gestural models. During this stage each student will create multiple physical models exploring different designs solutions. These designs should be generated by the function you are exploring and influence the volume, structure and skin of the bridge.

Part 3: Drawings + Diagrams
Exploration of drawings and creation of diagrams to explain the design intentions of each project. Students should document their design though the use of diagrams. Students should also begin to understand their designs in terms of section and plan drawings. Drawings are critical to understanding the design solution.

Part 4: Final Materials + Presentation
During this stage students will prepare their final drawings, diagrams and model for the final presentation.

SCHEDULE

CLASS 01
In Class: Studio Introduction + introduction to project. Site visit + documentation. Bridge precedents
Visit the project site to document the building site and surrounding area through photographs and sketches. Reference the suggested list of prepositions to identify and

construct your views that reveal spatial relationships among the elements in the environment. Consider the following prepositions as relational ideas which one can experience:

above, across, against, around, atop, behind, below, beneath, beside, between, beyond, inside, near, off, on, opposite, outside, over, past, through, toward, under, upon, within

Homework: Site documentations + Select one of the three collages that conveys the strongest composition and spatial potential. Using one selected collage as a base drawing, overlay trace, vellum or mylar and create a line drawing (pencil, b/w) of selected elements from your collage underlay. (You do not need to copy every line in your photo collage). Look for lines as abstractions rather than copying "objects."

Keep in mind that you are not literally "designing" your bridge through these collages but that the process will reveal vocabulary spatial conditions that are to be interpreted and developed into your final design.

M.
Tomkiewicz

CLASS 02

DUE: (3) sets of photo collages and corresponding prepositions for each image
Overlay line drawing
(Bring your digital files to class)

In Class: Discuss language of lines, planes and volumes

Homework: Create a separate figure-ground drawing from your overlay drawing, establishing thickness of lines and solid/void relationships.

Using your drawings, generate three distinct physical model studies which translate the two-dimensional images into a three-dimensional construct:

- Model 1: linear vocabulary
- Model 2: planar vocabulary
- Model 3: volumetric vocabulary

CLASS 03

DUE: original overlay drawing (revised as required)
Figure-ground drawing
Three study models (lines, planes, volumes)

In Class: Review homework, discuss site model
Representation of lines, planes and volumes in drawings

Homework: Developed models (lines, planes, volumes)
Drawing assignment (lines, planes, volumes)

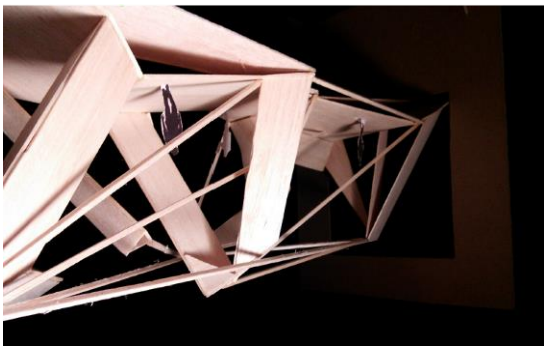
Photograph your revised models studying light and shadow.
All photographs to be consistent in size and in b/w.

CLASS 04

DUE: Revised models
Drawing assignment

In Class: Working session

Homework: Combining the vocabulary studied in the previous exercise, combine the three languages into one developed model which integrates linear, planar and volumetric language to create the spatial conditions in the sequence generated in your collage. Photograph your model studying light and shadow. All photographs to be consistent in size and in b/w.



M. Tomkiewicz

CLASS 05

DUE: Revised model (1/4"=1'-0"), clarify circulation
Site model
Photographs of model

In Class: Review drawing concepts and techniques (plans, sections, elevations)
In-class drawing exercise

Homework: Revised model
Plan and section drawings (incorporate human scale)
One-paragraph project description (typed and printed for submission)

CLASS 06

DUE: One-paragraph project description (typed and printed for submission)
Plan and section drawings

Homework: Revised plan and sections, elevations

CLASS 07
DUE: Revised plan, sections and elevations

Homework: Revised drawings
Develop final presentation

CLASS 08
In Class: mock pin-up: Review model and all drawings for graphic clarity

Homework: Develop final presentation
Final model, photographs of final model

CLASS 09
In Class: **FINAL REVIEW**
Homework: Process book (due Tuesday 3/3)

FINAL REQUIRMENTS

selected images studying site conditions, labeled
Two-dimensional sequence collages (three)
Three-dimensional process models (linear, planar, volumetric)
Integrated model combining linear, planar and volumetric languages (1/4" = 1'-0")
Sequence drawings
Floor Plan (1 at 1/4" = 1'-0")
Longitudinal section (1 at 1/4" = 1'-0")
Elevation (2 at 1/4" = 1'-0")
Final model (1/4" = 1'-0") and photographs
Process models